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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,786	09/08/2003	R. Brantley Sudderth	U 0192 OS/MINAP	1377

23657 7590 05/26/2004

COGNIS CORPORATION  
PATENT DEPARTMENT  
300 BROOKSIDE AVENUE  
AMBLER, PA 19002

EXAMINER
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ANTHONY, JOSEPH DAVID

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/657,786

Applicant(s)

SUDDERTH ET AL.

Examiner

Joseph D. Anthony

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 11, and 17-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Dependent claims 3, 11 and 19 are all indefinite in regards to the Markush member "di-alkyl ethers" since these said claims lack proper antecedent basis for "di-alkyl ethers" from the claims from which these dependent claims depend.

Independent claim 17 is indefinite in regards to line 3 of the claim. This problem could be overcome in one of two ways: 1) after the words 'ketoxime or' in line 3 of the claim insert --a combination thereof--; or 2) in line 3 of the claim, after the word "ketoxime" delete the word "or".

Claim 20 is indefinite because it lacks proper antecedent basis for the phrase, "wherein the kinetic additive is. . .".

Claims 18, and 21-24 are rejected here because they are dependent on a rejected base claim.

Please note that claims 20 and 23 are redundant claims since they claim essentially the same subject matter. As such one of the two claims should be canceled.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 9-15 and 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kordosky et al. U.S. patent Number 4,507,268.

Kordosky et al disclose water insoluble solvent extraction admixtures comprising: 1) a hydroxyl aryl ketoxime extractant, 2) a hydroxyl aryl aldoxime extractant, and 3) optional adjuvants such as kinetic additive and/or equilibrium modifier, see the abstract and claims. The kinetic additive can be selected from alpha-hydroxy oximes such as 5,8-diethyl-7-hydroxy dodecane-6-oxime and/or the alpha, beta-dioximes such as mixtures of 1-(4'-alkylphenyl)-1,2-propanedione dioximes, see column 8, lines 40-47. The equilibrium modifier includes aliphatic alcohols, such as tridecanol; alkyl phenols, such as nonylphenol; and organophosphorous compounds such as tributyl phosphate, see column 8, lines

48-55. Applicant's claims are deemed to be anticipated over at least Examples 4 and 5 wherein admixtures are made comprising: an aldoxime, a ketoxime, a kinetic additive and an equilibrium modifier. The taught equilibrium modifiers are deemed to inherently meet applicant's claimed limitations for such modifiers. The said admixtures are then used in a process of extracting copper from an aqueous solution.

6. Claims 1-3, 7, 9-11, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Virnig et al. U.S. Patent Number 6,231,784.

Virnig et al teaches water insoluble compositions comprising: 1) an aldoxime extractant, 2) an equilibrium modifier, and 3) optional kinetic additives selected from alpha-hydroxy oximes such as 5,8-diethyl-7-hydroxy dodecane-6-oxime and/or the alpha, beta-dioximes such as mixtures of 1-(4'-alkylphenyl)-1,2-propanedione dioximes, see the abstract, column 4, lines 10-65, column 5, lines 1-47, examples and claims. Applicant's claims are deemed to be anticipated over Examples 1-3 (see the Tables). The taught equilibrium modifiers are deemed to inherently meet applicant's claimed limitations for such modifiers. The said admixtures are then used in a process of extracting copper from an aqueous solution.

7. Claims 4-6, 8, 12-14, 16, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virnig et al. U.S. Patent Number 6,231,784.

Virnig et al '784 has been described above and differs from applicant's claimed invention in the following ways: 1) there is no direct teaching (i.e. by way of an example) to where the taught extraction compositions actually contain a kinetic additive according to applicant's invention, and 2) there is no direct disclosure to applicant's particular claimed equilibrium modifier species of 2,6,8-trimethyl-4-nonanone.

It would have been obvious to one having ordinary skill in the art to use the direct disclosure of the reference to optional kinetic additives selected from alpha-hydroxy oximes such as 5,8-diethyl-7-hydroxy dodecane-6-oxime and/or the alpha, beta-dioximes such as mixtures of 1-(4'-alkylphenyl)-1,2-propanedione dioximes as strong motivation to actually add such kinetic additives to the extraction compositions. It would also have been obvious to one having ordinary skill in the art to use applicant's particularly claimed equilibrium modifier species of 2,6,8-trimethyl-4-nonanone, since such a species comes within the generic disclosure of ketones as effective equilibrium modifiers, see column 5, lines 39-47. Furthermore, applicant has no showing of any superior and unobvious results that may result when 2,6,8-trimethyl-4-nonanone is used as the equilibrium modifier in lieu of another ketone equilibrium modifier that meets applicant's claimed limitations.

8. Claims 1-3, 7, 9-11, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Virnig et al. U.S. Patent Number 6,177,055.

Virnig et al '055 teaches water insoluble compositions comprising: 1) an aldoxime extractant, a ketoxime extractant or mixtures thereof, 2) an equilibrium modifier selected from linear diester or polyester of an unbranched dicarboxylic acid and an unbranched alcohol, and 3) optional kinetic additives selected from alpha-hydroxy oximes such as 5,8-diethyl-7-hydroxy dodecane-6-oxime and/or the alpha, beta-dioximes such as mixtures of 1-(4'-alkylphenyl)-1,2-propanedione dioximes, see the abstract, column 4, lines 40-58, column 5, line 56 to column 6, line 7, and column 6, lines 41-56, examples and claims. Applicant's claims are deemed to be anticipated over Example 1. The taught equilibrium modifiers are deemed to inherently meet applicant's claimed limitations for such modifiers. The said admixtures are then used in a process of extracting copper from an aqueous solution.

9. Claims 4-6, 12-14, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virnig et al. U.S. Patent Number 6,177,055.

Virnig et al '055 has been described above and differs from applicant's claimed invention in that there is no direct teaching (i.e. by way of an example) to where the taught extraction compositions actually contain a kinetic additive according to applicant's invention.

It would have been obvious to one having ordinary skill in the art to use the direct disclosure of the reference to optional kinetic additives selected from alpha-hydroxy oximes such as 5,8-diethyl-7-hydroxy dodecane-6-oxime and/or

the alpha, beta-dioximes such as mixtures of 1-(4'-alkylphenyl)-1,2-propanedione dioximes as strong motivation to actually add such kinetic additives to the extraction compositions.

10. Claims 1-3, 7, 9-11, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Dalton U.S. Patent Number 4,142,952.

Dalton teaches copper extraction with a water insoluble composition comprising: 1) one or more hydroxyaryloximes and 2) one or more alkylphenol equilibrium modifiers, see abstract, column 2, lines 56 to column 3, line 24 and the claims. Applicant's claims are deemed to be anticipated over the Examples. The taught equilibrium modifiers are deemed to inherently meet applicant's claimed limitations for such modifiers. The said admixtures are then used in a process of extracting copper from an aqueous solution.

***Prior-Art Cited But Not Applied***

11. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

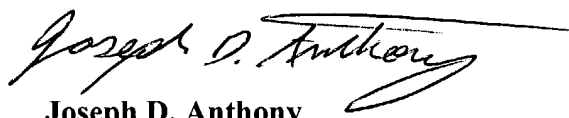
***Examiner Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. This examiner can normally be reached on Monday through



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Thursday from 8:00 a.m. to 6:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



**Joseph D. Anthony**  
**Primary Patent Examiner**  
Art Unit 1714

5/19/04